



The University of Texas at Austin
Architectural Engineering Program
2023 Spring Semester - Intro to Design 2
Semester Project

Proposed Residential Tower - Austin, Texas [2D and 3D-drawings]

Javeed Abdul, Sofia Leal Cavazos, Ricardo Rao

The 'Intro to Design 2' course focuses on applying 1st-principles of engineering-design in a team setting.
Students apply workflows and methods that emulate top firms in the profession.
(at a Preliminary Design / Schematic Design Level)

This includes:

- Architectural planning (circulation, space-planning, exterior-envelope design)
- Building Mechanical systems (equipment sizing, locations)
- Building Structural systems (gravity, lateral and foundation)
- and
- Advanced Engineering-Visualization tools

New to this 2022 semester:

- Parametric Design Tools (Rhino/Grasshopper + Revit/Dynamo)

Project Description:

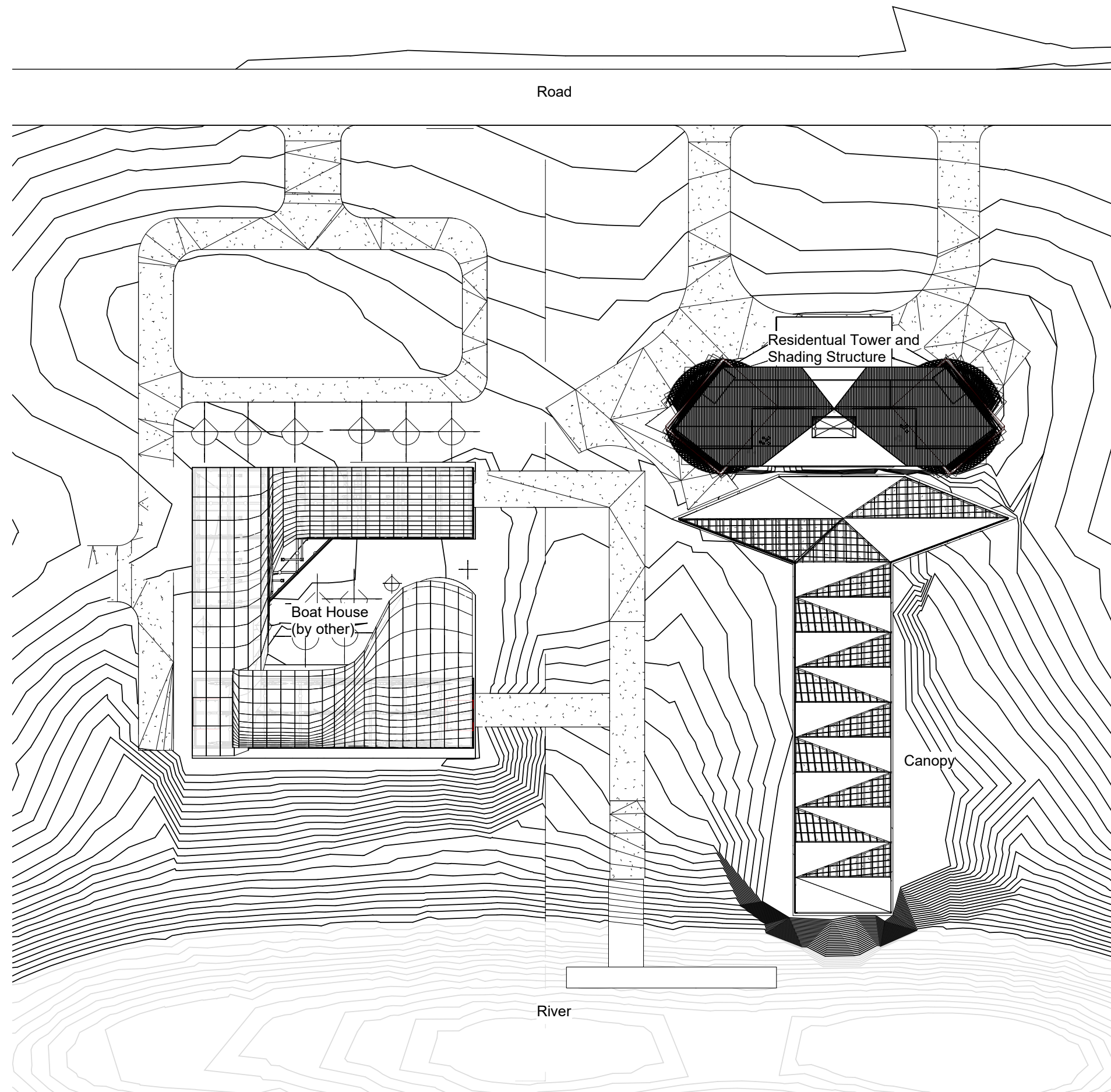
Each team of 3 students was asked to design a Residential Tower that could house a university rowing team.

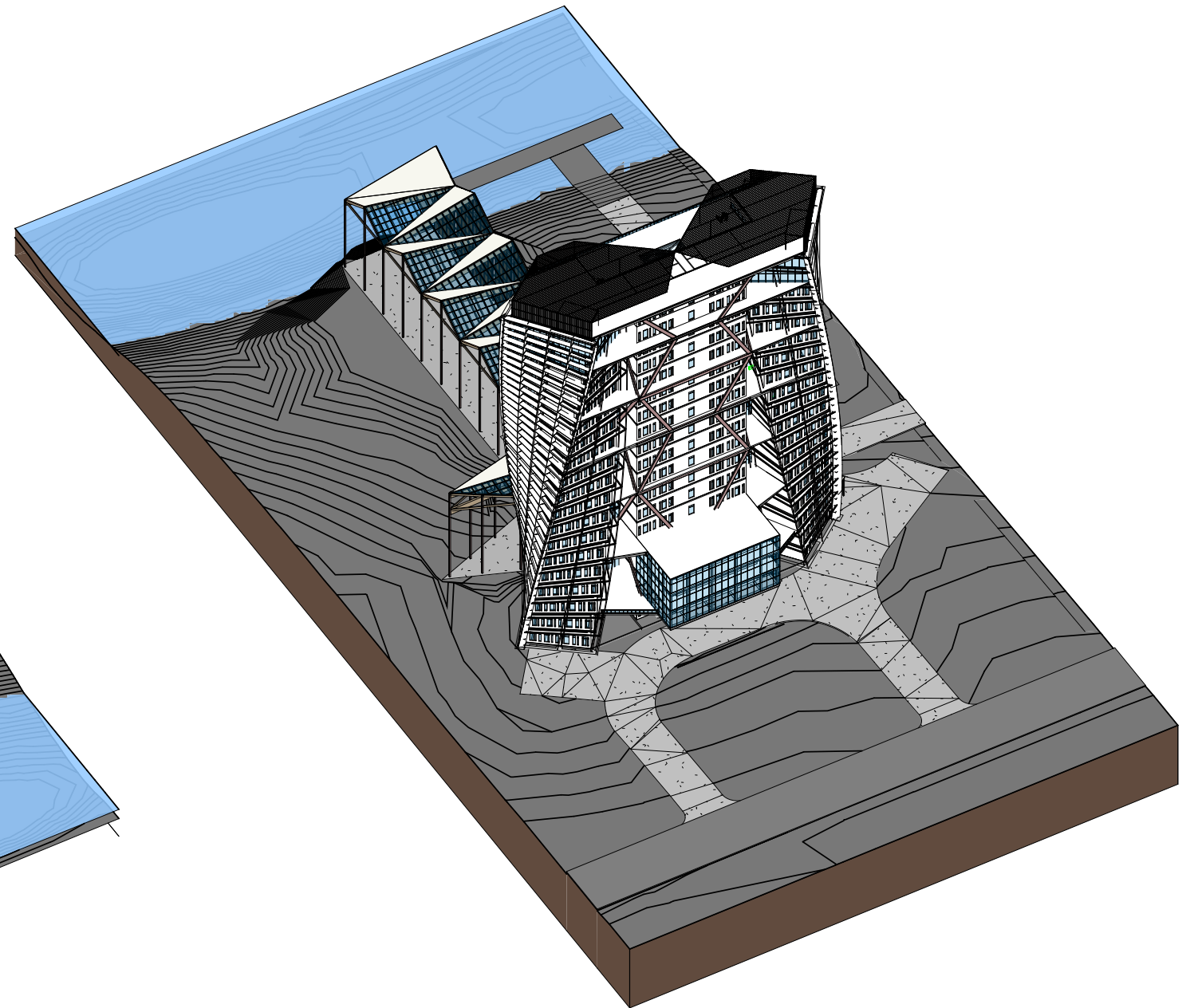
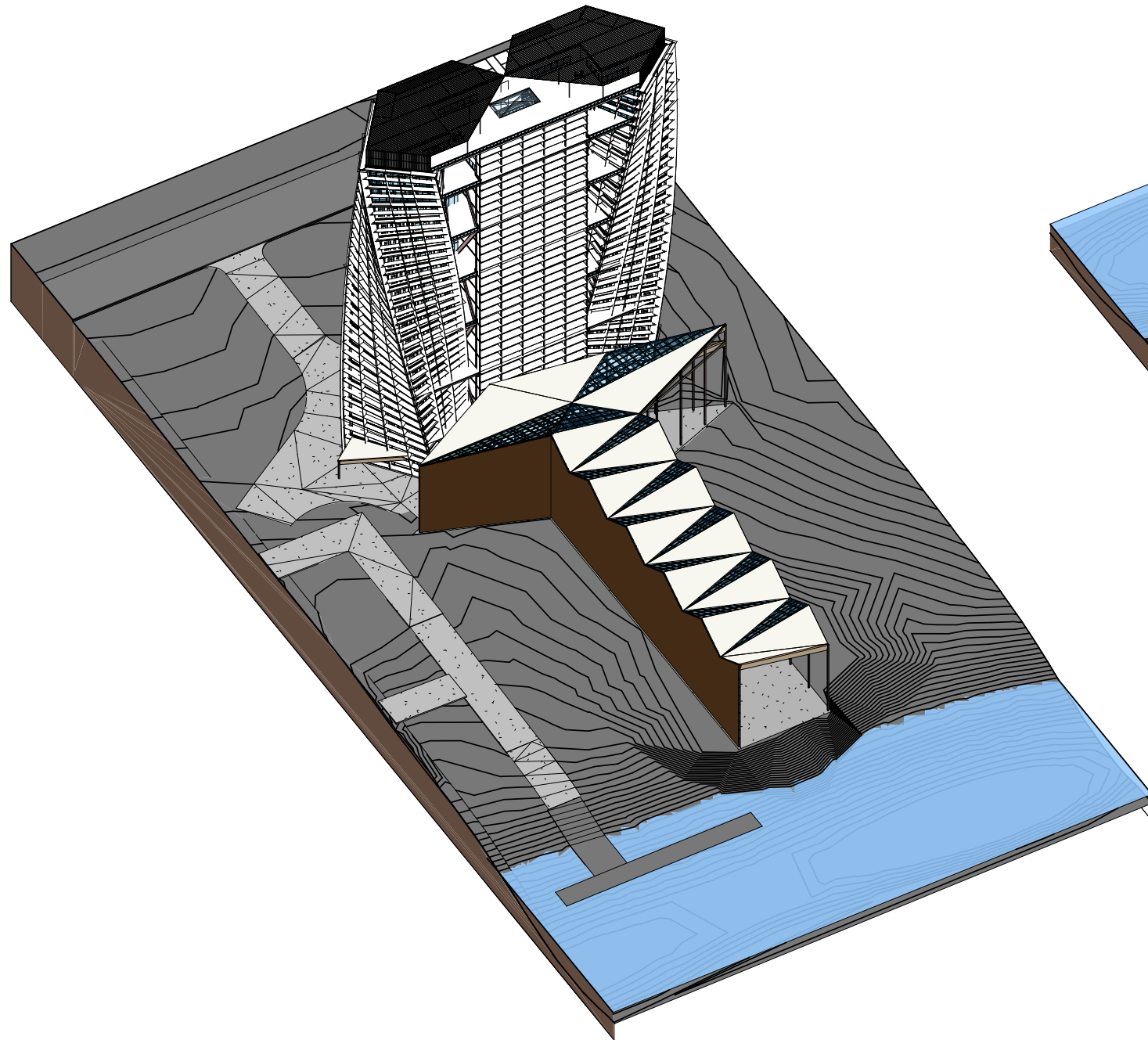
The design should be planned for zero-energy or net-positive energy efficiency.

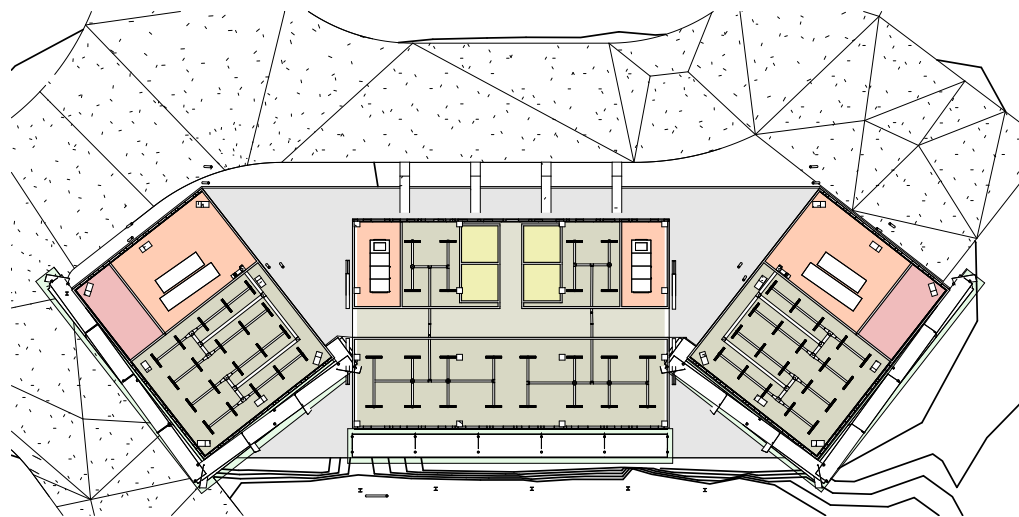
Structural elements should be expressed, celebrated and integrated with the architecture.

The building requirements include the following spaces:

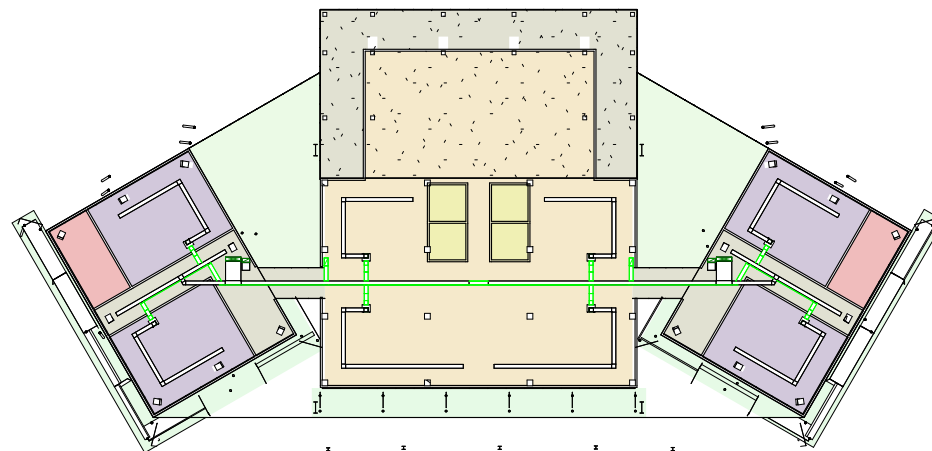
- Residential Tower with desired rooms, fire-egress, circulation and systems planning.
- Shade Structure on the East, South and West sides to fully protect the exterior building envelope.
- Large Shade Canopy with exposed wood / steel structure used for training and gatherings.



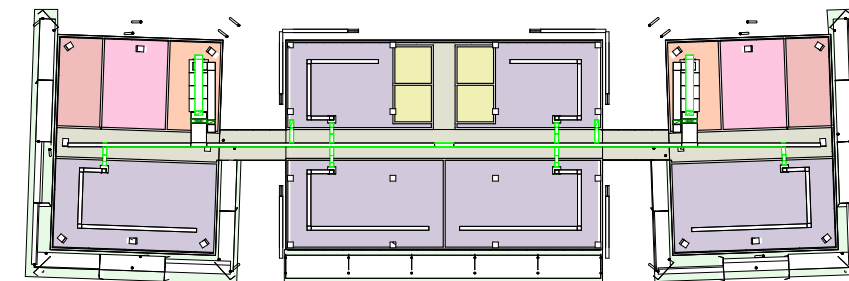




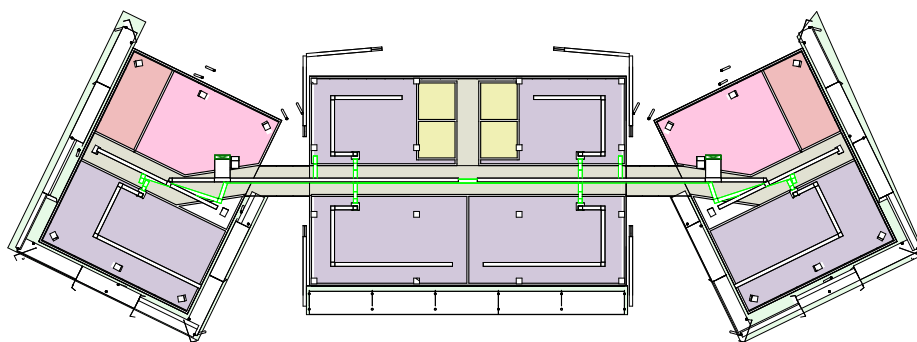
LEVEL 1



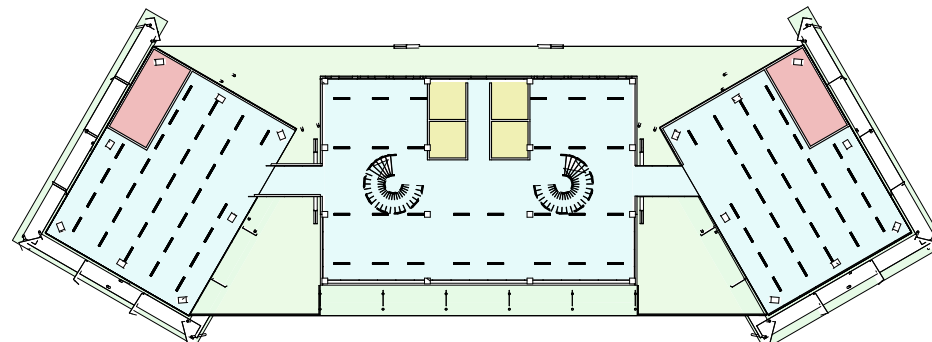
LEVEL 3



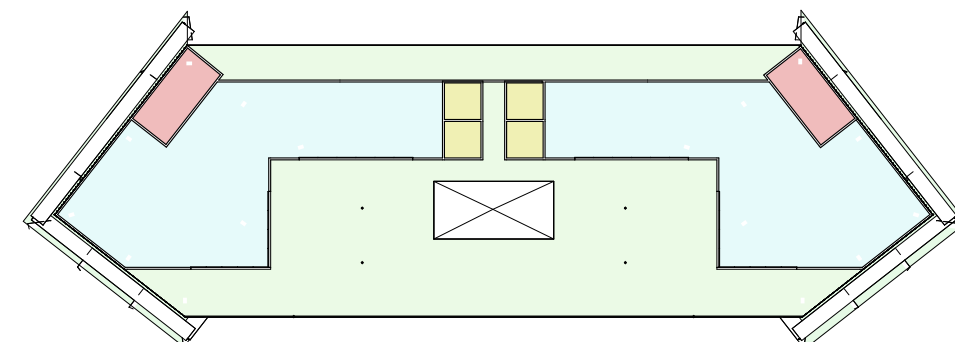
LEVEL 11



LEVEL 17



LEVEL 18



LEVEL 20

Room Legend



Amenity



Corridor



Fire Stairs



Mechanical



Site



Terrace



Apartment



Elevator



Lobby



Shading

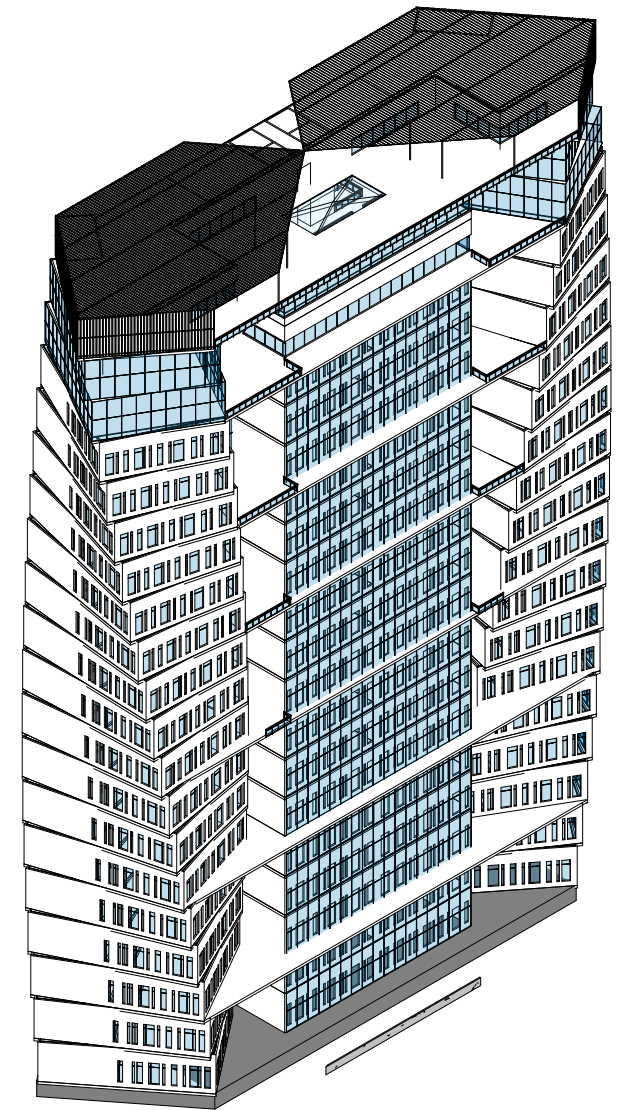
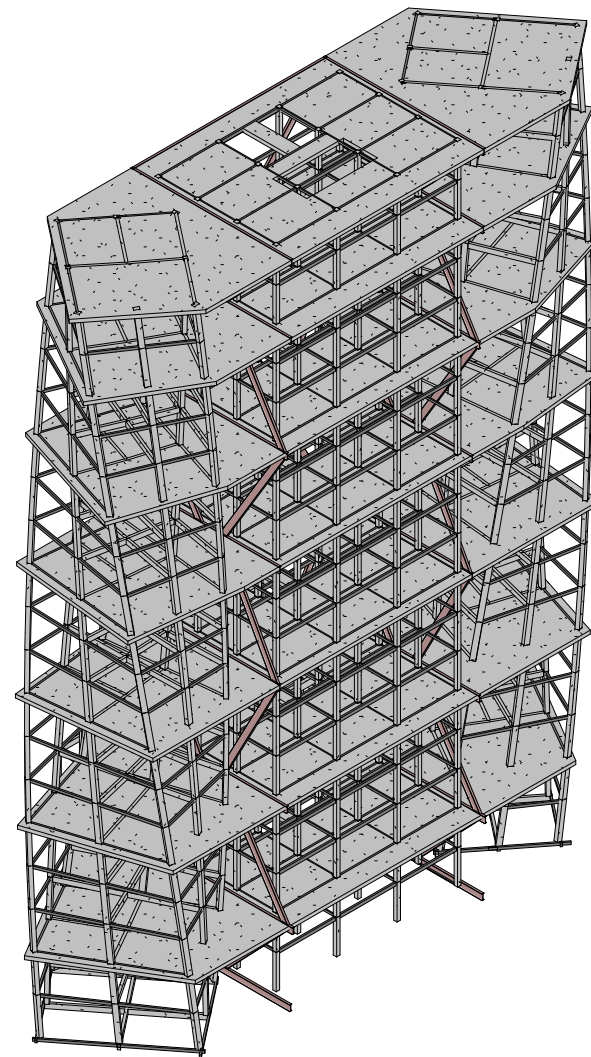
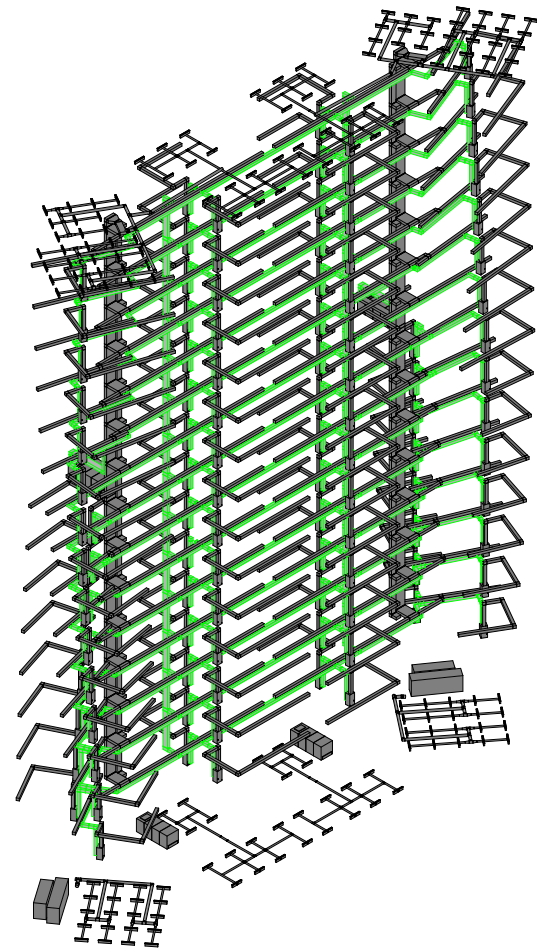
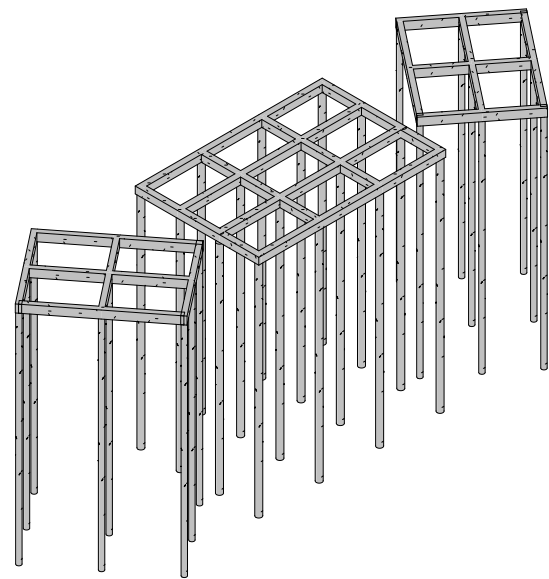


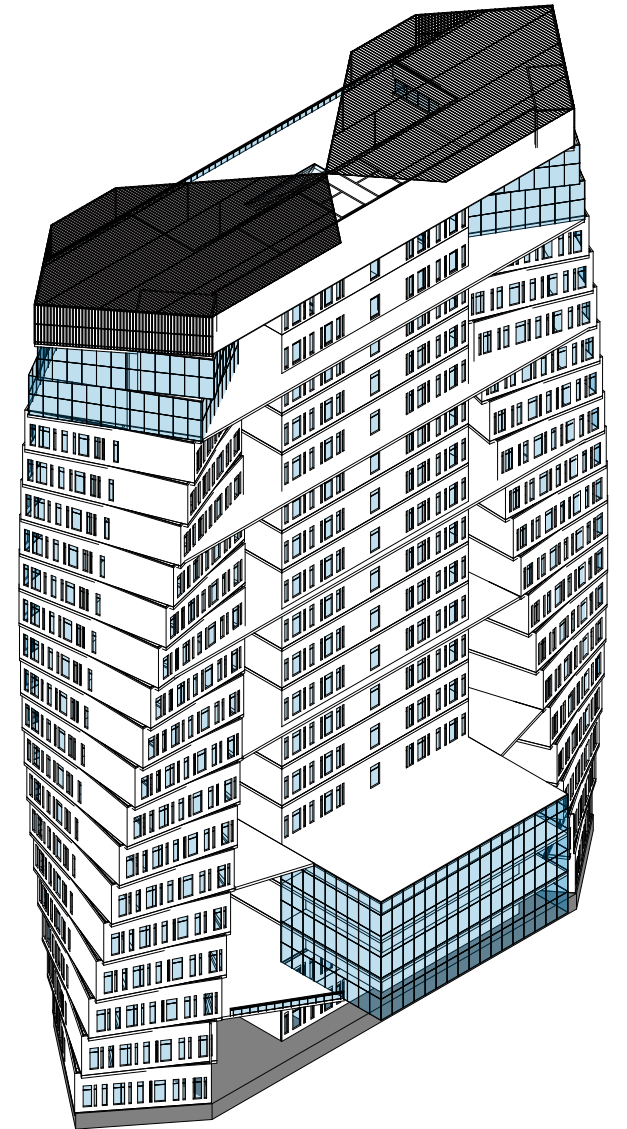
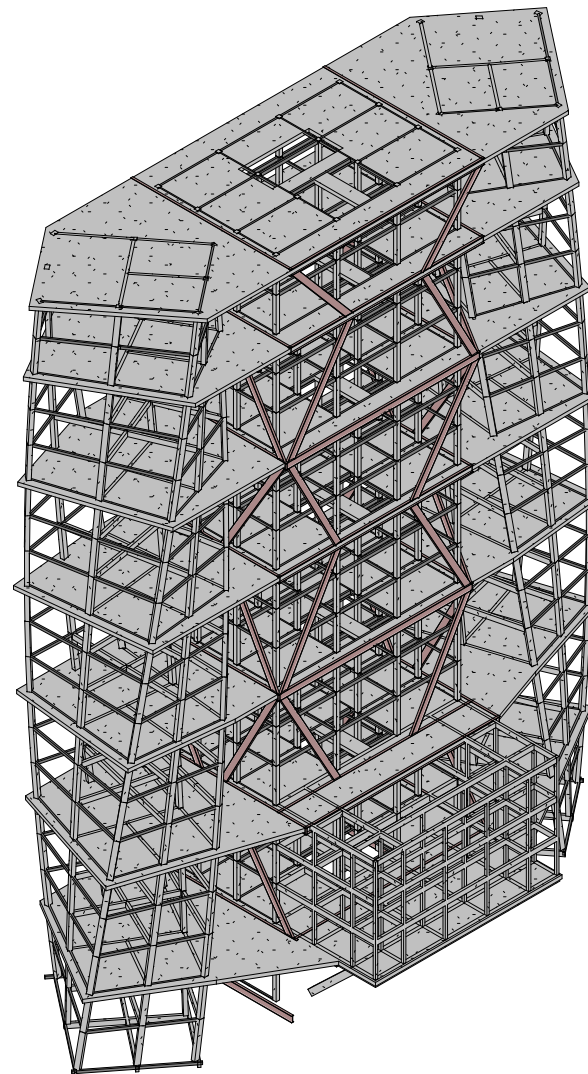
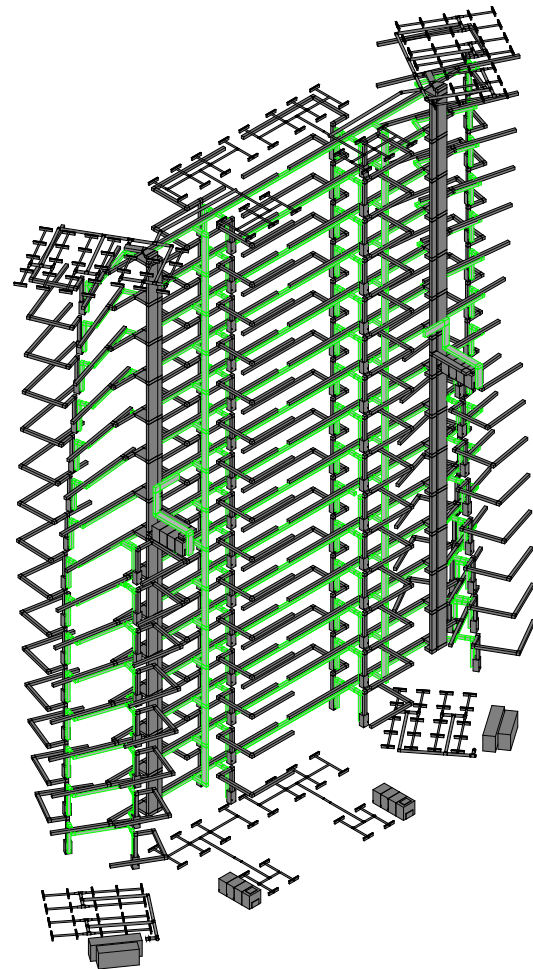
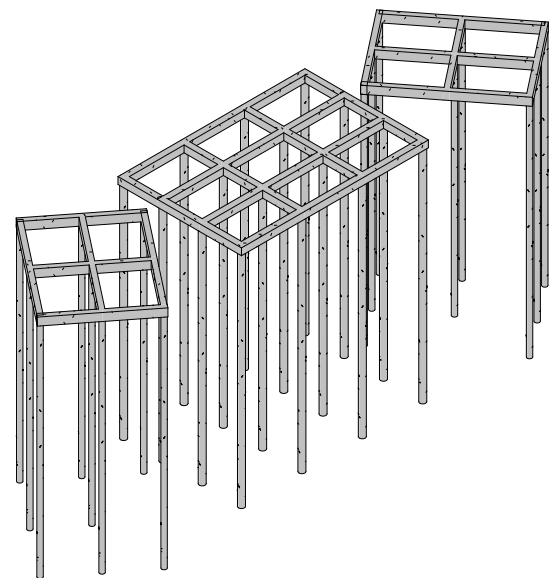
Study Space

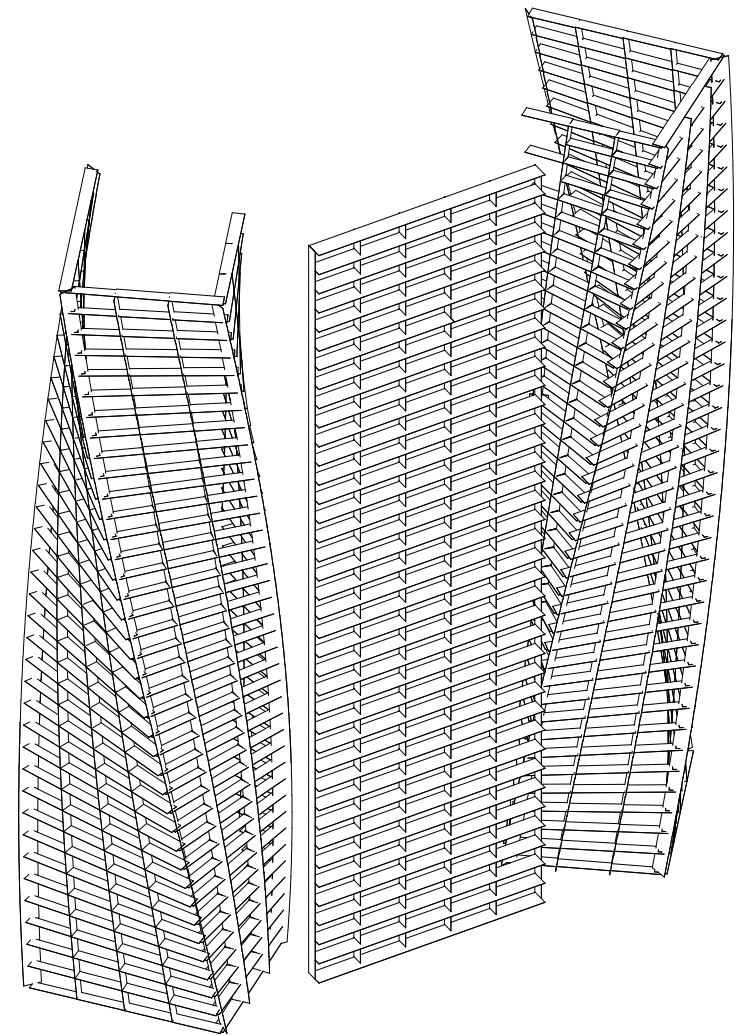
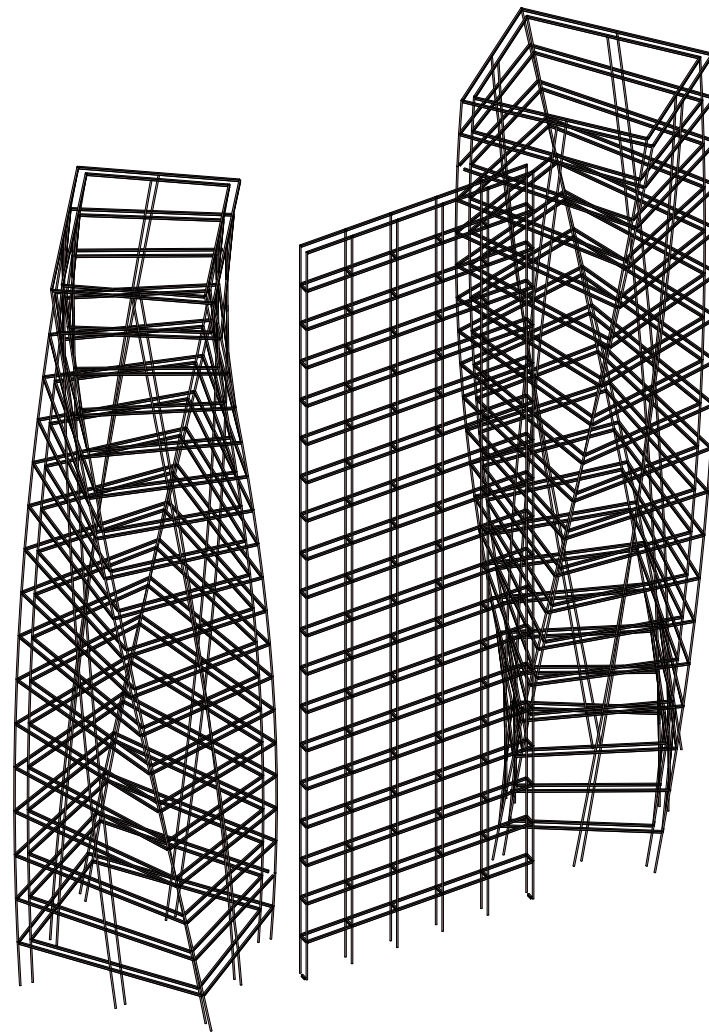
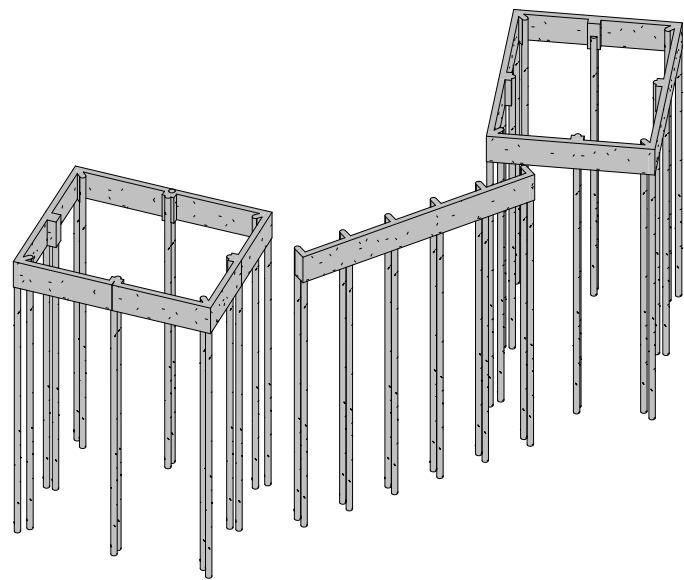


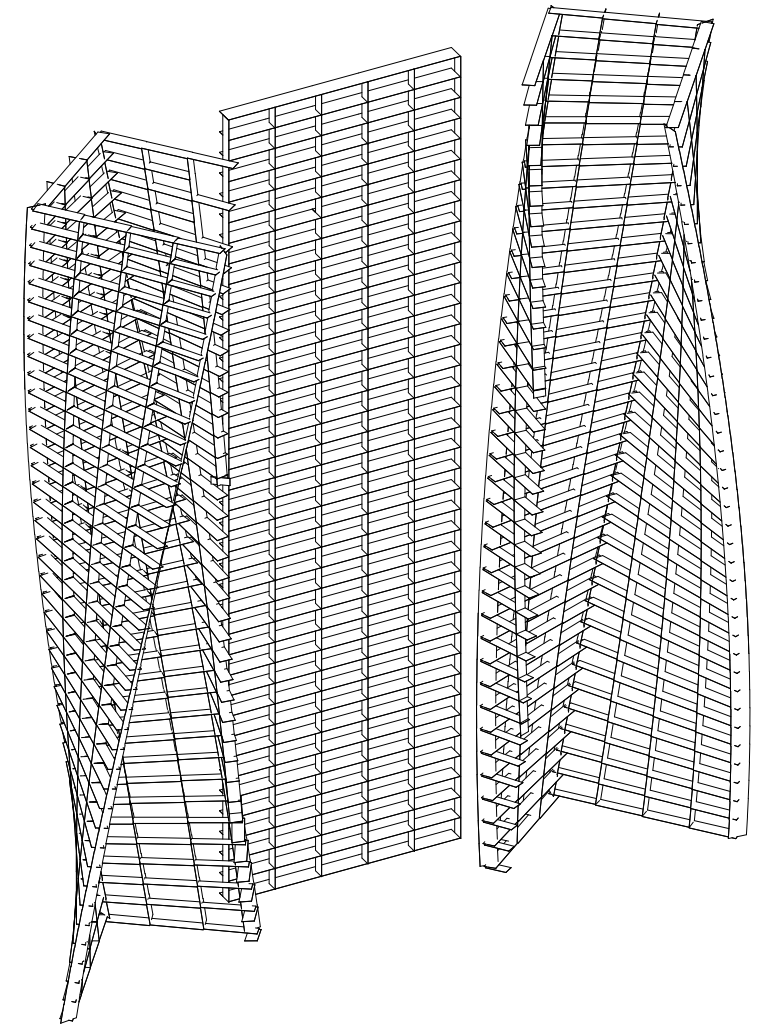
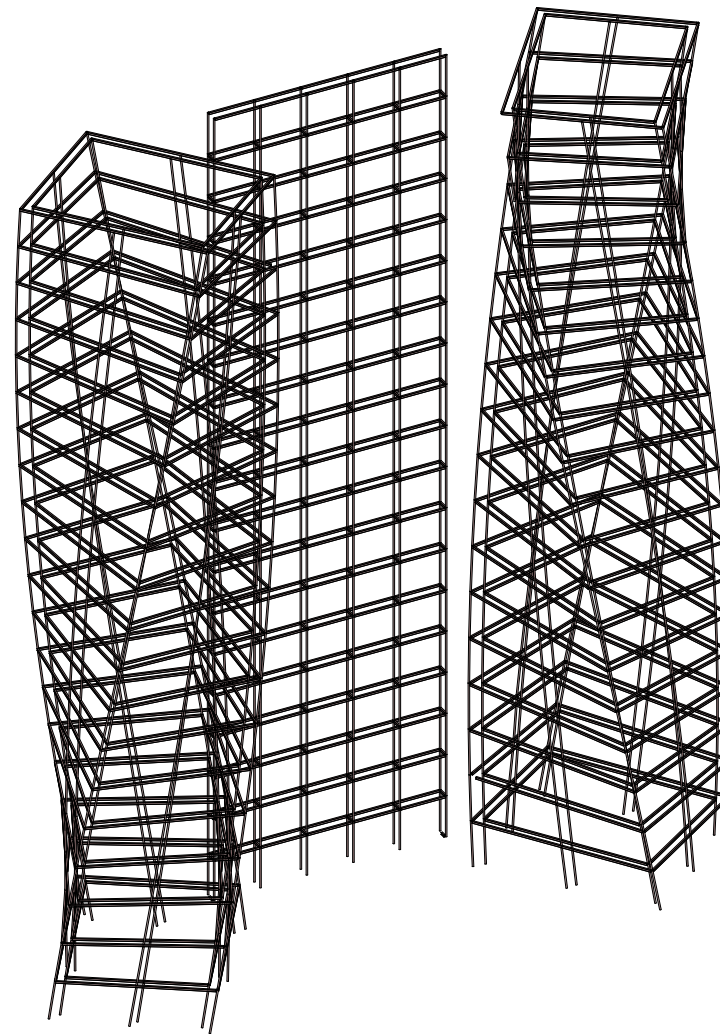
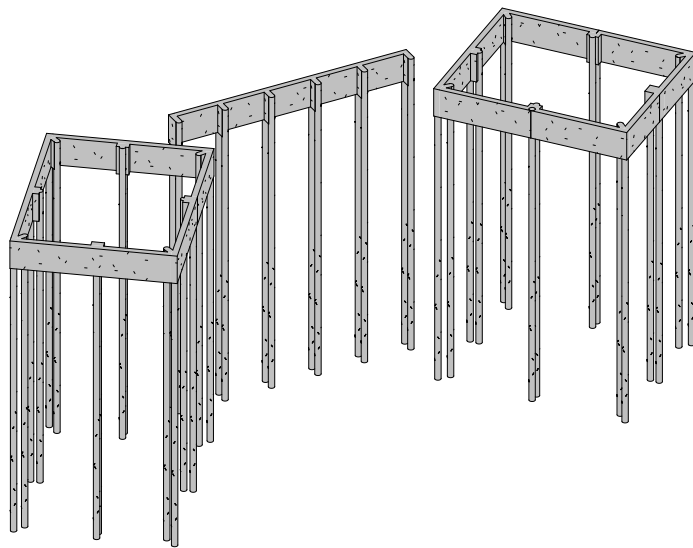
Theater

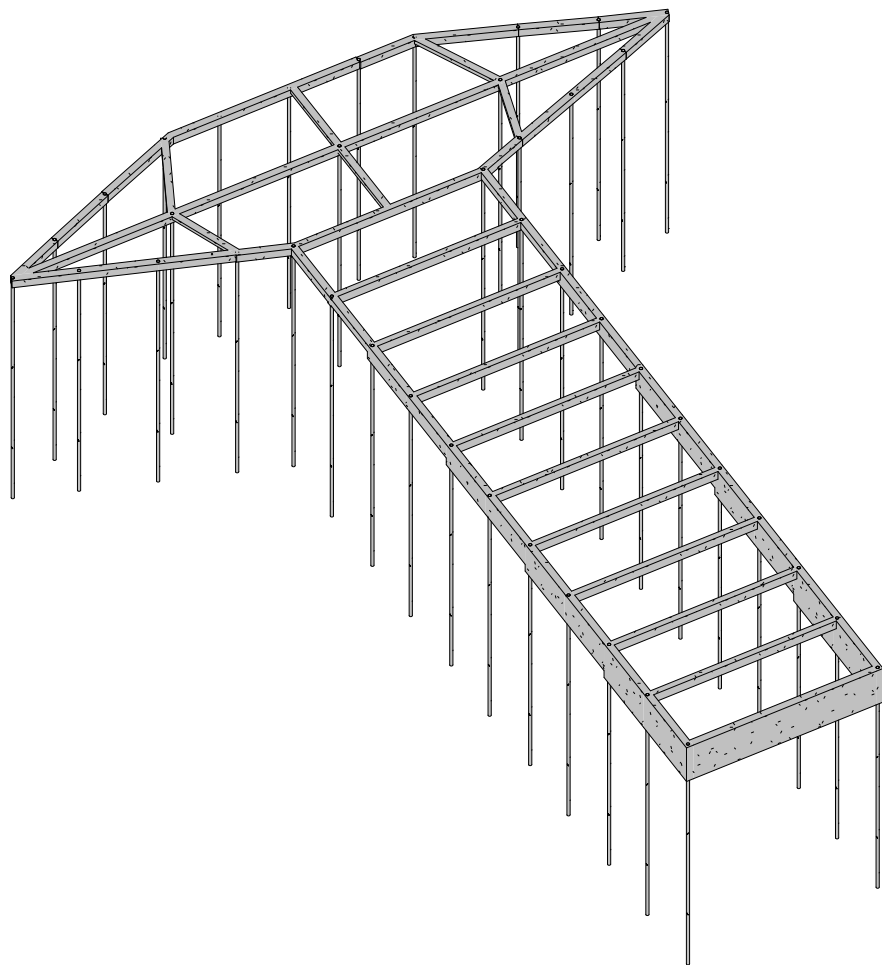




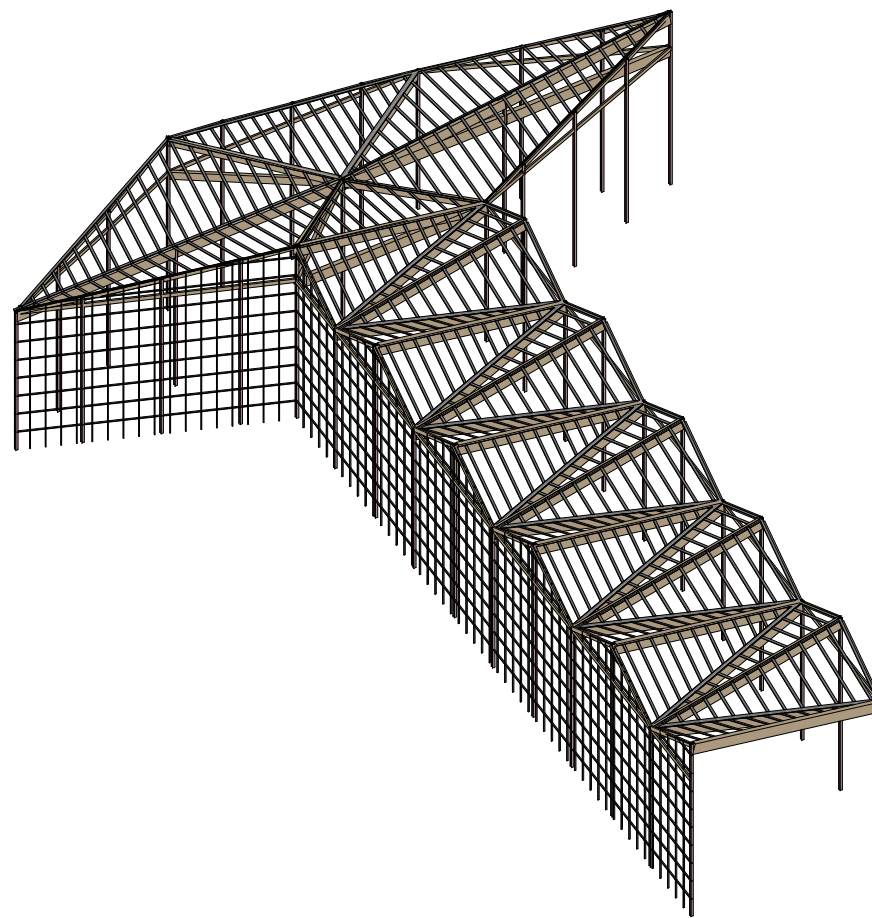




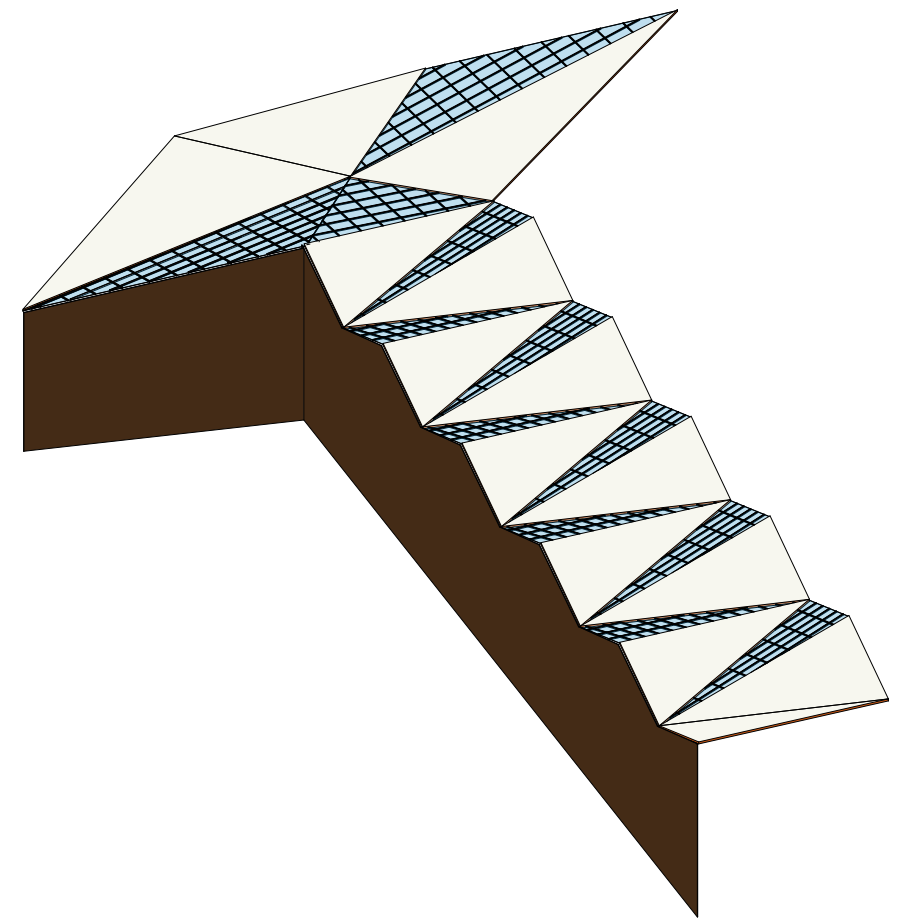




Fall 2023 Design II
 Javeed Abdul, Sofia Leal Cavazos, Ricardo Rao



Canopy Assembly - View A (SW)



Residential Tower
 Austin, TX

